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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,569	11/27/2001	Hans Cavander	027557-081	7439

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EXAMINER

PATHAK, SUDHANSHU C

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 01/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/993,569	Applicant(s) CAVANDER ET AL.	
	Examiner Sudhanshu C. Pathak	Art Unit 2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on November 27th, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on November 27th, 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-to-11 are pending in the application.

Drawings

2. Figures 1 & 2 should be designated by a legend such as "Prior Art" because only that which is known is illustrated.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title.

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
5. The disclosure is objected to because of the following informalities: The specification seems to have been translated directly into English. For Example, on Page 2, lines 8-9 discloses "the filter is used divided into segments", this should actually be "the filter used is divided into segments". A substitute specification must be filed, with the appropriate correction(s), accompanied by a statement that it contains no new matter.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 1-4, 6-8 & 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of Takahashi et al. (6,807,224) in further view of Sourour et al. (WO 99/41846).

Regarding to Claims 1, 3-4 & 7-8, the Applicant Admitted Prior Art (AAPA) discloses a spread spectrum communications receiver, comprising a matched filter (Specification, Page 1, lines 7-35), the receiver having a first synchronization mode in which the receiver initially establishes a connection to a base station (Specification, Page 1, lines 17-25), and a second synchronization mode, after a connection has been established, to detect and make measurements from other base stations wherein the mobile unit must synchronize to the other base stations before making the measurements (Specification, Page 1, lines 26-33). However, the AAPA does not disclose implementing the matched filter for correlating the received sample sequence and selecting a filter (divided into segments) for the first synchronization mode and a different filter (undivided) for the second synchronization mode.

Takahashi discloses a spread spectrum receiving device comprising a matched filter for correlating a received sample sequence with a known sample sequence (Fig. 4 & Fig. 6 & Fig. 's 5, 9, 12, elements 206, 207, 209 & Fig. 8, element "ST403" & Fig. 10, element "ST604" & Fig. 13, element "ST805" & Column 4, lines 35-45). Takahashi also discloses two modes of synchronization for the mobile unit wherein

the first mode of synchronization is referred to as "initial synchronous mode", performed at power up of the mobile unit, and a second mode of synchronization is referred to as "standby mode" performed after the initial synchronization and to detect and make measurements from other base stations wherein the mobile unit must synchronize to the other base stations before making the measurements (Fig. 2 & Fig. 3 & Column 1, lines 36-67 & Column 2, lines 1-16). Takahashi also discloses implementing a switch(s) and switch controlling section to select filters, for correlating, depending on the synchronization mode of the mobile unit. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Takahashi teaches implementing a selecting switch for selecting a correlation filter, for correlating the received samples and a known sample sequence, depending on the synchronization mode of the receiving device and this can be implemented in the communications receiver as described in the AAPA so as to provide initial synchronization at high speed and to improve the current consumption of the receiver. However, the AAPA in view of the Takahashi does not specify the correlating filter to be divided into segments in the first synchronization mode and be undivided in the second synchronization mode.

Sourour discloses a spread spectrum receiving device comprising a sliding correlator for performing correlation function between a received baseband signal and a reference baseband signal (Specification, Page 4, lines 10-20). Sourour also discloses dividing the correlator filter into sections and adaptively configured during operation of the receiver by changing the sections of the filter to process the group

of the received samples to maximize the performance of the receiver under different or changing conditions (Abstract, lines 1-8 & Specification, Page 6, lines 1-17 & Specification, Page 7, line 14-to-Page 10, line 15 & Specification, Page 14, lines 14-30 & Fig.'s 8A-C). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Sourour teaches implementing a correlating filter divided into sections configured adaptively such that it can be undivided, and this can be implemented in the receiving device as described in the AAPA in view of Takahashi so as to select different configurations depending on the mode of synchronization so as to enhance the performance of the receiver under different or changing conditions, thus satisfying the limitations of the claims.

Regarding to Claims 2, 6 & 10-11, the Applicant Admitted Prior Art in view of Takahashi in further view of Sourour discloses a spread spectrum receiver comprising a matched filter for correlating a received signal with a known signal wherein the receiver having a first synchronization mode and a second synchronization mode wherein the configuration of the matched filter depends on the synchronization mode as described above. Sourour further discloses each segment of the filter provides a respective output accumulation value (Fig. 8A-8C, elements 813, 814). Takahashi also discloses implementing a switch(s) and switch controlling section to select filters, for correlating, depending on the synchronization mode of the mobile unit. Sourour also discloses a switch for dividing the filter into segments (Fig. 8A-C, element 844). Sourour also discloses a controller, which variously combines the output of the accumulators of the segments of the filter such as the

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powers of the output accumulation values are added or the output accumulation values are summed and the power of the summed output accumulation value is calculated (Specification, Page 7, lines 14-30 & Fig. 8A, elements 812, 816).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that the AAPA in view of Takahashi in further view of Sourour teaches a spread spectrum receiver comprising a matched filters selected depending on the synchronization mode and an adaptive processor used to select powers of the output accumulation value are added or the output of the accumulation values are summed and the power of the summed output accumulation value is calculated. Furthermore, there is no criticality in the selection of the calculation depending on the synchronization mode is a matter of design choice and further this can be accomplished by the selection of the matched filter such that either the filter being divided into segments or undivided depending on the synchronization mode, thus satisfying the limitation of the claims.

8. Claims 5 & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant Admitted Prior Art (AAPA) in view of Takahashi et al. (6,807,224) in further view of Sourour et al. (WO 99/41846) in further view of Suzuki et al. (6,507,576).

Regarding to Claims 5 & 9, the Applicant Admitted Prior Art in view of Takahashi in further view of Sourour discloses a spread spectrum receiver comprising a matched filter for correlating a received signal with a known signal wherein the receiver having a first synchronization mode and a second synchronization mode

wherein the configuration of the matched filter depends on the synchronization mode as described above. However, the AAPA in view of Takahashi in further view of Sourour does not disclose the filter detects a correlation between Long Code Masked symbols transmitted from base stations.

Suzuki discloses a mobile communications system and a method for spreading code detection and frame/slot timing synchronization in a CDMA system using a long code masked symbol (Abstract, lines 1-9 & Fig.'s 1-6). Suzuki also discloses implementing a matched filter capable of deriving correlation results for timing synchronization (Column 2, lines 22-59 & Fig. 9, element 901 & Fig. 13). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention that Suzuki teaches a match filter to detect a correlation between Long Code Masked symbols transmitted from base stations, and this can be implemented in the system as described in the AAPA in view of Takahashi in further view of Sourour so as to implement the receiver in a W-CDMA communication system.


Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, it is recommended to the applicant to amend all the claims so as to be patentable over the cited prior art of record. A detailed list of pertinent references is included with this Office Action (See Attached "Notice of References Cited" (PTO-892)).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sudhanshu C. Pathak whose telephone number is (571)-272-3038. The examiner can normally be reached on M-F: 9am-6pm.

- If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on (571)-272-3056
- The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sudhanshu C. Pathak


STEPHEN CHIN
SUPERVISORY PATENT EXAMINE
TECHNOLOGY CENTER 2800

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